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Position Papers on Clothing and Textiles Research
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INTRODUCTION

Regional clothing and textiles research in the Western United States and Canada began in the early 1960s with the formation of two committees composed of researchers from the Region. One committee was on textiles and the other on sociobehavioral aspects related to clothing. In 1972, the first Western Regional Coordinating Committee on Clothing and Textiles (WRCC-9) was formed. This committee included representatives from the textile research area and the sociobehavioral research area. It has been under the WRCC format that research in the Western United States and Canada has continued to function.

Faced with tightening budgets and rising costs for universities and other funding agencies, a second coordinating committee, WRCC-23, was formed to consider the future goals of clothing research in the Region. After the first meeting in 1975, position papers covering many areas of possible clothing and textiles research were drafted. These papers presented the opinions of the authors on research needs in the various areas as a basis for discussion of Regional priorities. Apparel construction research was not included because of the excellent work done by private industry.

At the next annual meeting in 1976, working from the initial papers, the Committee drew up a list of research areas, noting the ones that were of greater priority for future research in the Region. Priorities were established by considering the uniqueness of the Region as well as the increasing pressures of inflation, energy shortages, population growth, and the resulting changes in patterns of living. Regional considerations included population distributions, climatic variability, presence of varied ethnic groups, and life-style changes.

The areas of greater priority for the Region are listed alphabetically. No attempt was made to narrow the selection to one area, because of the diversity of the Region including the availability of researchers and research funds within each state. Exclusion of an area does not mean research is not needed; rather, it is not considered as high in priority for the Region.

Clothing and textiles research priorities in the Western Region are:

- Assessment of durability and fashion life
- Changing life-styles
- Culture
- Energy shortages and other scarcities
- Needs of special groups of people.

Criteria for the selection of research topics as developed by WRCC-23 are:

- Criticality
- Timeliness
- Cost saving or dollar value
- Utilization of research expertise
- Project cost in time and dollars
- Feasibility
- Benefits over time.

For Regional research, the committee added the following criteria:

- Divisibility among researchers and over time
- Value to Region
- Value of doing Regionally.

AESTHETIC AND CULTURAL ASPECTS OF CLOTHING

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Cultural and aesthetic aspects of clothing are closely related and overlap often occurs. For example, the definition of beauty is culturally derived.

Both areas are also subject to the same problems. One of the major problems is the need for scholarly efforts to be directed toward the compilation of research on dress. Because such information is not readily available, scholars in other fields as well as scholars of clothing do not adequately or correctly use such information in their work.

Aesthetics

Writings on aesthetics range from prescriptions for beauty to studies of creativity. This area also includes designing and designers, elements of design, fashion and fashion influences, motivational as well as other theories of selection, and visual or tactile perception. Most recently, the surge of interest in the fiber arts has generated numerous publications on color and design.

Aesthetics in dress is closely involved with psychology and sociology as well as with the more obvious area of art. Aesthetics is also closely related to economics, with aesthetically oriented reasons frequently being given for the underutilization of wardrobe components.

Research is needed for a better understanding of aesthetics, including the process of evaluating the self in relation to dress. The self in this case would include physical as well as personality factors. Studies are needed on methods of delivery that would allow for more effective teaching of self-awareness as applied to dress. Too often, wardrobe selection is presented as a prescription for choosing design elements or best dollar values while ignoring personality and social milieu. The ultimate goal of research in this area would be to make available to a wide range of people the means of self-evaluation for effective apparel selection.

Concepts of beauty need to be studied in order to understand their impact on practices. For example, one aspect that needs examining is the perception of art principles in relation to application. Also needed is examination of a system (value or other) that enables a person to apply art principles to one part of his life and not to another.

In studying aesthetics, researchers must beware of assuming that there is a right and a wrong to beauty.

Culture

Current research in the cultural aspects of dress includes descriptions of clothing and studies of the relationships between dress and culture in historical reference, modern times, and cross-cultural contexts. Cross-cultural research in clothing is usually concerned with modern dress, although recent studies have done comparisons using historical periods.

Other works have focused on dress in terms of perceptions of "others" under the headings of nonverbal communication or first impressions. These studies frequently include or concentrate on personality factors. In the social sciences, there is a split between those who believe that personality is completely a product of a culture and those who take a more moderate stand. Difficulties in defining limits for cultural influences on dress should serve to emphasize the need for research in this area rather than to discourage the potential researcher.

Western cultures view personality as a constant over time in a variety of situations while other cultures do not. This assumption is reinforced by ethical sanctions. As with other research, studies of dress have made this assumption, usually unconsciously. Common sense as well as more empirical evidence demonstrates the existence of everyday inconsistency. Studying dress from a standpoint of "multiple selves" may prove profitable since research in the area of personality has been inconclusive. This area needs to be re-examined in light of the refinement of research regarding personality.

When looking at behaviors related to dress, it is not easy to separate the effects of the individual's personality from the effects of the cultural system. In fact, it can be difficult even to define the cultural milieu in which a person is operating, if indeed a person operates in only a single system. This dilemma does exist and, unfortunately, often goes unrecognized. Clarification of the use of terminology is one of the major challenges for research in the cultural aspects of dress. This would facilitate coordination of research, giving a base upon which to build needed theoretical research.

However, until a theoretical framework evolves, other research should continue. The Western Region still includes many unique subcultures. However, the older ways are disappearing and must be recorded before they are lost. Textiles of the past are deteriorating, and records must be made. Without such records, future generations will not have the source materials for design inspiration or the understanding and appreciating of their heritage.

In addition, a comprehensive record of collections of costumes and other accessories is needed to aid in locating resource centers for study. This type of project lends itself to Regional projects, because individuals

within each state find it easier to locate sources than do outsiders. The resulting publication would have the potential for wide distribution and use.

Such a project could lead to reports on the dress of different ethnic and cultural groups within the Region. Descriptions of local dress might be acceptable as a project if they were issued in the form of pamphlets for individual states with introductions covering the Region. Each pamphlet could then serve as resource material for those within that state, while the entire set would meet the needs of those with broader interests.

Materials on ethnic dress could also be a base for Regional projects such as variations in perceptions (impressions) in dress styles among subcultures.

It is likely that most future research of a nonhistoric nature would tend to include more than cultural aspects of dress. Foremost in importance in such studies must be the careful consideration of definitions and use of terminology and concepts to achieve prominence for research in dress.

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CLOTHING AND THE SELF

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With longer-wearing textiles, easy care features, and the trend to casual living, it might be assumed that the total amount of money spent on clothing and the importance placed on clothing would be on the decrease. But this is far from reality. America is spending more per capita on clothing than it ever did previously. American closets overflow with clothes, a large number of which are considered out of fashion, or don't fit well but are all too good to be discarded. Not only has the traditional feminine attraction for clothes survived, but the male has entered the race with unprecedented zeal.

All in all, the consumer in his insatiable quest for satisfaction continues to buy more and more when less and less could answer to his physical need for personal covering. The more important and less easily scrutinized function of clothing is the role it plays in the presentation of self in everyday living. Not until we know this can we assess the outcomes of clothing. Do the costs of clothing, including our personal and national resources, outweigh both the manifest rewards such as physical protection and the latent rewards including improved feelings of self?

Clothing for Two Worlds

Man lives in two worlds: the physical environment and the social environment. The first provides him with the essential elements to sustain biological life while the latter supplies the stimulus to develop and maintain a sense of self-identity. Clothing can be seen both as a heat control and physically protective mechanism on the one hand, and as a means of defining the self socially on the other. Clothing, therefore, belongs in both worlds since it functions to sustain man by providing physical protection and aiding in the development, maintenance, and enhancement of the self. Clothing is an artifact that man uses in the course of daily living, but clothing differs from all others in that it is more consistently present and more intimately involved with presentation of self than all others.

Implications

To the novice, clothing is often viewed as a trivial and inconsequential part of life. To the scientist, clothing has much greater implications since its study is deeply imbedded in both the physical and the social sciences. Research needs to bring these two points of view together and put clothing in its proper perspective. It appears unreasonable to assume that clothing that is constantly worn in some form or another would have no more meaning to us than a package of salt, a book, or a chair. The first step

to sound decisions in the marketplace is for the consumer to "know himself." Research must be undertaken to identify the relationship of clothing to the self, so that the findings may provide a sound foundation for consumer educational programs that in the past have been largely buymanship and consumer advocacy. Only research can prove that the actor is more important than either the process or the product. The relationship between actor and product in this case is highly complex. It needs to be studied in order to understand the process.

Priorities Research

Research into the role of clothing as an extension of self needs to be conducted in a number of areas. These include:

1. Developing an instrument to measure an individual's extension of self.
2. Discovering to what degree clothing is an extension of self.
3. Researching value systems in general and the value system specific to extensions of self.
4. Determining if evaluations of self are related to purchase of clothing.
5. Determining if self-awareness is related to satisfaction with clothing purchases.
6. Determining the effect of clothing on personal space.
7. Determining whether clothing as an extension of self is related to number of dollars spent on clothing, feelings of comfort, perceived conspicuousness of clothing, or need for social approval.

COMPARATIVE COST OF FASHION APPAREL ITEMS

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For centuries many individual writers, including Shakespeare, have estimated that the cost of purchasing fashionable clothing is in excess of the expected wear life of the garment. Yet no definitive study has been made of the actual cost of fashion to the clothing consumer. A method of comparing the cost of fashionable clothing with the cost of the clothing items included in the Consumer Price Index (CPI) is needed to assist the consumer in making choices in the marketplace.

Each year, fashion items probably represent a sizeable portion of the dollars spent for clothing, particularly for the age groups concerned with appearance--young adults and adolescents. Clothes often are discarded by these groups for fashion reasons while the garment is still useful. Information is needed regarding the way the design cost of new items is passed on to the consumer. Is the cost of the risk involved in producing fashion goods added to the price of all clothing items or are these costs reflected in higher prices of fashion items? Are the clothing items that rapidly reach the large-volume stage sold to the consumer at a premium price? Answers to such questions could provide the consumer with information necessary to make choices not only in the marketplace but in evaluating the cost of fashion apparel items to the nation. The techniques developed for the frequent fashion changes in apparel may be applicable to the analysis of the cost of fashion of other consumer items.

Recent Studies

Most studies of fashion in recent years have been concerned with the process of fashion adoption, with the prediction of fashion, or with management skills related to fashion. None of these studies has attempted to measure the cost of fashion to the consumer. The CPI gives the consumer a measure of the changes in prices of a constant market basket of clothing. It was not designed to measure the cost of what people are actually buying. Consumers adjust what they buy to the relative prices they encounter in the marketplace and to new items as they are introduced. The price index does not immediately reflect these changes in expenditures. An item that is no longer purchased because of changing economic conditions, changes in fashion, or changes in consumer preferences may continue for a time to carry a disproportionate weight in the index until it can be appropriately phased out. For instance, girdles and skirts continued to be part of the clothing market long after the majority of women had replaced both items with pants. Eventually a consumer expenditure survey establishes a new group of items in the market basket. The 1972-73 Consumer Expenditure Survey will be used to adjust the items priced for the CPI; however, new fashions in clothing may make the clothing index obsolete before it is used.

The Bureau of Labor Statistics has proposed--and limited funds have been provided to plan--a continuing quarterly expenditure survey. Data from an ongoing expenditure survey perhaps could be analyzed to determine new items that are adopted in any one quarter and items that increase in volume over the year. The age and socioeconomic groups that most frequently purchase fashion items could also be determined from this survey as well as the areas in which fashion items are most frequently purchased.

Methodological Problems

There are methodological problems in estimating the comparative cost of fashion for different consumer groups by using a quarterly expenditure survey and consumer price index figures. Most fashion changes are evolutionary, just modifications of existing types. The cost of these minor modifications probably could not be separated from price changes as defined by the CPI. If new items are utilized for a Fashion Price Index, to what are these items compared? How do you determine if these new items will replace basic items when a fashion trend is just beginning? In the past there have been years in which no new apparel items have been part of the fashion picture, yet a change in hemline has increased the demand for a basic item--the skirt or dress.

A study needs to be made to determine what measurements will be most useful to the consumer. Studies of past fashion trends may be valuable in determining components for a Fashion Price Index. A survey of industrial data now available indicates volume changes in new fashion items and may provide useful data. A Regional study could provide a model for a national index.

The high inflation rates of the past few years and the predicted shortages of energy and raw materials for the future indicate the need to evaluate patterns of consumption in which waste of resources may occur. Current industrial practices and consumer expenditure patterns may not change unless consumers have data to evaluate the cost of practices that provide high immediate satisfaction but low long-term utility.

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CONSUMER CLOTHING: ECONOMIC PROBLEMS

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A critical need for research in the economic aspects of clothing has been created by shortages of raw materials and energy, plus rising costs of the basic consumer needs of clothing, food, and shelter. Ways in which families and individuals of various income levels can realize greater value from clothing dollars under these conditions should be studied.

The Western Region

Changing employment opportunities and other factors have created population shifts in the nation, which in turn influence consumer clothing needs. From 1960 to 1970 there was far greater migration into the Western Region than into any other region of the United States (Bowles, Beale, and Lee, 1975). Of the people aged 65 and over, about 75 percent went into the Southern states while 25 percent migrated into the Western states. There are also many people of different ethnic groups relocating within the Western Region. As people move from one regional area to another or even shift within a state, they become vulnerable to changes in clothing needs due to physical and social factors such as climate, employment, size of community, and stage in the life-cycle. Since clothing prices are generally higher in the Western Region, replacement of clothing can be a critical financial problem for citizens in the West.

Other Research Needs

People in the United States have come to accept seasonal purchase of new clothing as normal behavior (Mork and Magrabi, 1974). There is a need to study how people accustomed to underutilization of clothing can cope with the need to maximize clothing use. Changes in the economic and social structures have occurred rapidly, allowing little chance for adjustment in consumer values or attitudes.

Retirement incomes and other fixed or low incomes due to situations such as unemployment or migration may not allow for acquisition of clothing that meets social, physical, and economic needs when other basic needs are met (Mork and Magrabi, 1974; Pulley, 1973). How people can best adjust to lowered incomes when retirement is reached should be studied. It is unknown whether retired people of middle income can suddenly change their life-styles and values to accept a lower quality of clothing than that previously used and still be satisfied. Thus, the question arises whether current clothing budgets can be adjusted to high clothing costs and satisfy clothing needs for the retiree. Cost and quantity budgets form an invaluable resource, but standard budgets must be considered only as guides (Winakor et al., 1971)

and used with consideration of the physical and sociopsychological needs that clothing can satisfy.

Another area needing research is how members of various family types can satisfy their clothing needs. Today's separating families need financial estimates for clothing allowances; more single parents are raising children and need help in estimating clothing allowances. How do individuals in families with only one wage earner adjust their ideas of appropriate clothing purchases when they compare themselves with families in which there are two or more sources of income?

To deal with the energy crisis, consumers will be forced to use less energy for heat and laundering. There are indications that homes will become smaller, with less storage space for clothing and other items. All of these changes will probably affect the kind and amount of clothing purchased in order to satisfy body thermal needs, as well as refurbishing and storage restrictions. Research needs to be done in these areas to provide factual information for consumer education.

A review of the literature indicates that clothing acquisition, use, storage, and care is a complicated process, and far more complex when individual differences in values, attitudes, life-styles and socioeconomic structures are considered for satisfaction of need (Winakor, 1969). Scitovsky (1976) notes that one of the most fundamental of human needs is the stimulus of novelty. He encourages re-examination of American life-styles to determine how the need may be satisfied. Minimal research has been done to determine attitudes toward use of various types of low-cost clothing, including used clothing, by individuals of all ages, races, and income levels.

Aspects of clothing economics that need investigation were well defined in 1970 (Schlater et al., 1970). In the Western Region, the following areas appear critical at this time: (1) alternatives for value and cost of clothing for people of various races and socioeconomic levels, (2) assessment of consumer satisfaction with clothing budgets for people on limited incomes, and (3) consumer satisfaction with multiple-use clothing. High migration, increasing numbers of retirees, and higher clothing costs are unique aspects in the West that indicate need for research in the economics of clothing in the Western Region.

Research methods that might be used include the experimental approach, observation, and survey or interview. Costs could be controlled by care in the research design.

Home economists lack information for factual answers to these researchable problems. Consumers on moderate and low incomes face a future of rising clothing costs and diminishing raw materials. All consumers would benefit from knowing more efficient ways to use clothing resources and more about the value of the clothing dollar.

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COST OF CARE AND MAINTENANCE OF TEXTILE PRODUCTS

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The consumer is very conscious of the cost of a garment at the retail level, but often forgets to take into consideration the cost of care and maintenance of that textile item. If the label on the garments says "Dry Clean Only" the cost of care and maintenance will be higher than the garment with the label "Machine Wash Warm." Research has studied the effectiveness of various laundry and dry cleaning procedures, but very few studies have looked at costs of these procedures.

The Phosphate Controversy

Detergents took center stage in the early 1970s, when ecology became a major concern within our society. Phosphate detergents were given the blame for the pollution and eutrophication of our waters. Everyone became upset--the industry, the consumer, the politician. The question now arises whether phosphates from detergents were indeed the culprits, or just a small part in a much larger, more complicated problem. The fact was, and still is, that there are other, greater sources of phosphates in municipal, industrial, and agricultural wastes.

So why did phosphate detergents receive the blame, the attention, and all this concern? When politicians began arousing consumer concern, the industry had to take action. Detergent manufacturers had no choice but to introduce low-phosphate detergents and no-phosphate detergents into the market. But problems arose with the introduction of new ingredients and elimination of the other ingredients.

Phosphate replacements in detergents have resulted in greater costs to the consumer. Caustic nonphosphates may shorten the useful life of both the washing machine and clothing in hard-water areas. Of course, with low and nonphosphate detergents, one could use water softeners, which are an added ingredient, adding to the cost of caring for clothing and household textiles. In addition, nonphosphate detergents are more expensive than phosphate detergents. The nonphosphates also present a serious health hazard by ingestion, due to the caustic nature of the chemicals.

Some authorities also suggested use of soap instead of synthetic detergents. However, soap used in hard water leaves residue, and again, a water softening agent is needed. Soap in hard water also causes flame-retardant chemicals to lose effectiveness. The use of soap is also a poor solution because its resource is a scarce one.

Although there are very few bans on phosphate in detergents today, decreased amounts of it are in use and many ecology-minded people prefer and look for brands of detergents with low phosphate content. The cost-benefit relationship is very much in question here. More research needs to be done to find out if lowering the phosphate content in detergents has helped alleviate the eutrophication problem. If not, consumers should be educated so they can get better results in laundering their wearing apparel and household textiles.

Cold Water Washing

Some sources have advocated the use of cold water in washing clothing. However, this does not present a simple solution. First, cold water does not kill germs. Second, in order to get satisfaction from cold water washing, it might be necessary to use a presoak, a longer wash cycle, and more detergent. Thus, the question arises, with a longer wash cycle, are you saving energy by not using hot water? There is an indication that the cold water detergents are higher in price than the regular detergents. Further, studies have indicated there is little difference in the average cost per washer load between hot water washing with standard detergent and cold water washing with special detergent.

Washing machines add to the cost of care and maintenance of clothing, but purchasing a sophisticated, more expensive washing machine might save money in the long run, since most of them have water level controls. The consumer can use water economically, thus saving money and conserving water.

Fabric softeners also add to the cost of clothing care. However, it is generally agreed that fabric softeners should not be used with every washing, since they reduce fabric absorbency. They also reduce the static electricity that causes lint buildup. A study has shown that fabric softeners affect clothing appearance only after initial launderings. They also reduce tensile bursting strength, increase tear strength, and add comfort to our clothing. It seems, however, more studies need to be done to test the frequency with which softeners ought to be used. Perhaps clothing wear could be maximized with the proper amounts of fabric softeners.

Research Needed

More research is needed in the cost of care and maintenance of clothing. The research that has been done in this area might not have been done if the phosphate ordeal had not taken place. When the new detergents, ingredients, and replacements began infiltrating the market, the interest in this area grew.

Although there are results and information out on detergents, fabric softeners, washing machines, and dryers, there is very little valuable information on the costs of caring for textile products. Whenever a new

cleaning product comes out on the market, some kind of research is done on its effectiveness. Cost is very rarely researched. More research in this area is definitely called for, and the consumer as well as industry will benefit from such investigations.

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PHYSIOLOGICAL ASPECTS OF CLOTHING FOR THE HANDICAPPED

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New information is needed to determine the unique clothing problems of the physically handicapped. Such information would be helpful in providing functional, comfortable, and attractive apparel that is readily attainable at a reasonable cost.

Increased Participation for Handicapped

Large segments of the population in the United States are handicapped because of physical deformities or limitations due to birth defects, surgical procedures, accidents, debilitating or chronic diseases, or advanced age. To alleviate many problems of the handicapped, public efforts are under way to eliminate architectural barriers, provide suitable transportation, integrate the educable into public schools, and broaden employment possibilities. Thus, people of all ages heretofore hampered by severe restrictions are now realizing greater potential for independent, productive lives. Those who were homebound are now able to participate in many activities away from home. Clothing needs and wants of the handicapped are changing and becoming more critical as these individuals emerge into the broader society. Greater visibility and increased participation in activities create greater needs for clothing that is not only comfortable but is functional and attractive as well.

A search of recent literature revealed that a number of small studies have investigated comfort as one of the important factors in garment designs for handicapped women and children. No reports were found concerning specific handicaps and the resultant special clothing needs of men and boys of any age and in various states of independency or employment. Moreover, research has been sporadic as well as lacking in the depth or breadth deemed necessary to benefit the many large groups of people with special needs.

Clothing comfort is directly related to physical aspects of warmth or coolness, body fit, mobility, and skin contacts, and a number of interrelationships exist among the physical, psychological, and sociological aspects of clothing comfort. There is little evidence that these have been investigated. Although garment style and fit have been major areas of concern, it appears that little, if any, research has investigated the various roles of fibers, yarn and fabric constructions, and fabric finishes with regard to the special needs of the handicapped.

Large-Scale Studies Needed

To gain knowledge of special clothing needs and practices would require teamwork and multidisciplinary efforts for large-scale studies. These could

reveal commonalities among the clothing problems of persons with a variety of handicaps and indicate the possible common solutions. As a result, mass production of special items of clothing or patterns could be encouraged.

An orderly approach to the research would include:

Surveys of large groups of handicapped and aged.

Surveys of accessibility of special clothing for these groups.

Laboratory studies of performance characteristics of clothing, taking into account various interrelationships among fibers, fabrics, garment designs, and the special requirements of the handicapped.

Conducting follow-up wear studies to test results of laboratory studies in end-use situations.

Making appropriate recommendations to industry.

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RELIABILITY OF TEXTILE PERFORMANCE

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When purchasing textile products, the consumer's evaluation of an article is primarily subjective because of lack of sufficient information. Subjective evaluation, however, often cannot predict performance during use, and thus consumers frequently make poor choices in their textile product expenditures. Information on product performance can be based on the results of laboratory tests. If this information were available to consumers, reliability of textile performance could be increased, improving consumer satisfaction and savings with textile purchases.

Quality Index Model

The development of a model for providing a quality index for consumer use in purchasing textile products could have an impact on policy making by governmental agencies and at the same time provide the tool needed by manufacturers to provide performance information to consumers. The development of procedures is not likely to come from industry, but only from consumer-oriented research teams such as home economists.

There are many laboratory tests available for evaluation of the properties of textile products. These tests generally measure a single property, such as strength or resistance to abrasion, and do not provide a single-valued criterion for judging the quality of a given product with regard to comfort, durability, ease of care, and so forth. The consumer would be best served by a single value based upon these complex properties. One method of grouping has been recently suggested, and these procedures could be expanded upon.

The consumer will not attach the same significance to all tests, and the relative importance of such general properties as wear and comfort will differ from product to product. To have maximum benefit to the consumer, the rating of a textile product should be based on criteria that weigh the results of relevant tests according to the product under evaluation. These criteria, which could be obtained by selected consumer surveys, do not exist today.

After the properties by which an article is to be judged or graded have been selected, and the weighing of each has been determined, then a method for combining the results of the tests must be developed. Usually the different tests provide results in different units, so a simple summation is not possible. A method recently used to quantify the degree of flammability of fabrics might be a procedure that could be used for other performance characteristics of textile products.

Research Required

To improve the reliability of textile performance for consumers, it is recommended that standards of performance and a grading system be developed for staple textile products based on performance levels that are acceptable to consumers. The research required to accomplish this objective would include the following three phases:

1. Consumer studies would be conducted to determine expectations with respect to performance of staple textile products. Aspects of performance to be considered would include appearance (smoothness, crease retention, seam pucker, etc.), durability, dimensional stability, color change, and ease of maintenance.
2. Standards of performance would be determined for specific staple textile items based on performance levels that are acceptable to consumers and that consider the performance of the entire textile product.
3. A graded system that could be used for labeling would be developed for selected staple textile products. This system would be based on performance standards.

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TEXTILE COMFORT

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Textile comfort provides satisfaction of bodily needs through use of textile products. This subject includes thermal comfort obtained from apparel and household textiles, physiokinetic comfort derived from fabric extensibility and apparel design, and comfort provided by tactile sensations.

Textile comfort has been emphasized recently by a renewed consumerism thrust, interest in the welfare of various age groups, particularly the aged, a need to conserve energy and other resources, and changes in textile technology.

Investigation Needs

A partial review of literature on comfort provided by textiles has revealed need for further investigation in such areas as thermal conductance of textile products; garment design and air exchange; comparison of stretch and nonstretch woven fabrics and knitted and woven fabrics; fabric properties created by finishes; and thermal comfort in outdoor conditions.

The recent and continuing energy crisis points to the need to determine the role that current textile fibers and fabrics play in providing thermal comfort. Lowering indoor temperatures in winter and elevating them in summer indicate possible changes in apparel and household textile selection for maintaining thermal comfort. Since outdoor temperature variations have not changed drastically in recent times, new investigations on the effect of textile outdoor thermal comfort may not seem as relevant to the present as does indoor thermal comfort. Investigating use of new textile fibers and constructions in providing thermal comfort in outdoor environs, however, could be valuable in updating studies previously made.

Widespread use of knit textiles for most types of wearing apparel is adequate reason for investigating the role of knit fabrics in thermal and physiokinetic comfort. Since there is a current trend toward using woven fabrics in preference to knits, comparison of physical comfort of garments made of each type of fabric needs to be further investigated. Comfort of stretch fabrics and bias cuts also may be compared to knit fabrics.

Problems of hand and wearing comfort associated with certain fibers and finishes need to be investigated. While the hand of flame-retardant finished fabrics has been criticized, one study determined that the tactile sensation of such fabrics was preferred over that of nontreated fabrics. A difference of opinion indicates need for more research. Hand and other tactile sensations need to be determined for various fabric constructions, contemporary blends, and various finishes.

Problems involved in researching textile comfort are minimal. Laboratory techniques and equipment are available for measuring certain thermal aspects. More subjective tests regarding physiokinetic comfort can be made more valid by careful planning. Following are several suggested areas affecting thermal and physiokinetic comfort worthy of investigation.

1. Clothing design on physiokinetic comfort.
2. Fabric extensibility on physiokinetic comfort.
3. Tactile sensations created by fabric texture or fiber composition on physiokinetic comfort.
4. Various fibers; various textile constructions; specific environmental conditions such as heat, humidity, wind, sunlight, etc.; layering in clothing; and garment design on thermal comfort.
5. Various textile window treatments on thermal comfort.
6. Various carpet constructions and installations on thermal comfort.
7. Various types of bed covers on thermal comfort.

Valuable Knowledge

Knowledge obtained from textile comfort research would be of value to textile users, manufacturers, and conservationists. The natural resource crisis and a natural physical desire for comfort make research in this area of immediate value. To some, the energy crisis gives first priority to research concerned with saving energy; to others, the physical needs of the very young, the aged, and the handicapped may seem of greater importance.

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THEORETICAL MODELS FOR RESEARCH

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Search for a theoretical model applicable to investigation of proportionate emphasis on physiological needs, group expectations, and self-expectations (or physiological, sociological, and psychological needs) in clothing has proved fruitless. The theoretical systems that appear most likely to provide a point of departure are systems analysis, value structure, decision making, and management.

In reading the abstracts, only one thesis was found that dealt only with the three aspects of clothing behavior under consideration. Wages (1974) developed a scale for the assessment of physical, sociopsychological, and psychological comfort. Further exploration of the measure might be profitable.

Seven theses that involved some study of values included three employing the Allport, Vernon, Lindzey Study of Values--Frost (1968), Hao (1971), and Taylor (1967)--and two that employed the Creekmore Clothing Values Scale--Hao (1971) and Sutton (1974). Two additional theses included study of aspects of clothing use that are similar to the Creekmore Scale, but were devised or adapted by the investigators. Goodman (1969) investigated aesthetic, management, interest, and social-approval clothing behaviors. Humphrey (1967) explored the aesthetic, comfort, interest, management, modesty, psychological-dependence, social-approval, and special-attention aspects of clothing use.

Additional investigation, in depth, would be necessary to ascertain if any of the above studies employed a theoretical model that would have merit for the investigation of the specific concern, i.e., investigation of proportionate emphasis on physiological, sociological, and psychological needs.

Deacon and Firebaugh (1975) identified a number of factors found to influence home management, and these might well be investigated relative to clothing needs; these factors included age, sex, race, education, health, family stage and composition, occupation, social position, and personality traits.

A possible next step might be to invite for consultation someone knowledgeable about systems analysis who also has worked in application to a specific field. Persons writing about home management and/or family economics and systems analysis include Drs. Ruth Deacon, Francille Maloch, and Rose Steidl. Others who have worked with the NCR-52 Family Economics Committee who might be considered as consultants are Drs. Gordon Vivens, Francis Magrabi, Dorothy Price, and Josephine Staab. Dr. Geitel Winakor may also have worked with systems analysis.

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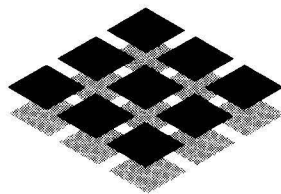
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